



Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Denver
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Laboratory Job ID: 280-140398-2
Client Project/Site: Xcel Energy GW CCR Monitoring -
Comanche
Revision: 1

For:
HDR Inc
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Denver, Colorado 80202

Attn: Molly Reeves

Authorized for release by:
10/26/2020 12:50:06 PM

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Method Summary	6
Sample Summary	7
Client Sample Results	8
QC Sample Results	18
QC Association	20
Chronicle	21
Certification Summary	25
Chain of Custody	26
Receipt Checklists	30
Tracer Carrier Summary	32

Definitions/Glossary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Qualifiers

Rad

Qualifier

Qualifier Description

G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation

These commonly used abbreviations may or may not be present in this report.

☒	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Job ID: 280-140398-2

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy GW CCR Monitoring - Comanche

Report Number: 280-140398-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 9/11/2020; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the coolers at receipt time were 3.4° C, 4.1° C, 4.2° C, 5.0° C, 5.1° C, 5.2° C and 5.5° C.

Please note, the following samples were received with insufficient preservation: W-2B (280-140398-3), W-7 (280-140398-7), MW-1 (280-140398-8), MW-2 (280-140398-9), MW-3 (280-140398-10) and MW-5 (280-140398-12). 6mL of Nitric Acid (HNO₃) preservative was added by the laboratory, and the samples pH was adjusted to a pH of less than 2.

RADIUM-226 (GFPC)

Radium-226 was detected in method blank MB 160-482619/24-A at a level exceeding the MDC and RL. All other QC fall within criteria (LCS, LCSD, RER/RPD). Per client request, the data is reported.

Several samples were prepped at a dilution due to discoloration and/or cloud appearances.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-228

Several samples were prepped at a dilution due to discoloration and/or cloud appearances.

The Ra-228 detection goal was not met for the following samples due to the presence of matrix interferences: W-2A (280-140398-2) and MW-2 (280-140398-9). Analytical results are reported with the detection limit achieved.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RADIUM-226/RADIUM-228 (GFPC)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

REVISION

Report has been revised to include the intercompany COC for St. Louis as well.

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Client Sample ID: W-1	Lab Sample ID: 280-140398-1
<input type="checkbox"/> No Detections.	
Client Sample ID: W-2A	Lab Sample ID: 280-140398-2
<input type="checkbox"/> No Detections.	
Client Sample ID: W-2B	Lab Sample ID: 280-140398-3
<input type="checkbox"/> No Detections.	
Client Sample ID: W-3	Lab Sample ID: 280-140398-4
<input type="checkbox"/> No Detections.	
Client Sample ID: W-5	Lab Sample ID: 280-140398-5
<input type="checkbox"/> No Detections.	
Client Sample ID: W-6	Lab Sample ID: 280-140398-6
<input type="checkbox"/> No Detections.	
Client Sample ID: W-7	Lab Sample ID: 280-140398-7
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-1	Lab Sample ID: 280-140398-8
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-2	Lab Sample ID: 280-140398-9
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-3	Lab Sample ID: 280-140398-10
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-4	Lab Sample ID: 280-140398-11
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-5	Lab Sample ID: 280-140398-12
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-6	Lab Sample ID: 280-140398-13
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-6-DUP	Lab Sample ID: 280-140398-14
<input type="checkbox"/> No Detections.	
Client Sample ID: W-3-DUP	Lab Sample ID: 280-140398-15
<input type="checkbox"/> No Detections.	
Client Sample ID: W-5-EB	Lab Sample ID: 280-140398-16
<input type="checkbox"/> No Detections.	

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-140398-1	W-1	Water	09/09/20 12:25	09/11/20 14:05	
280-140398-2	W-2A	Water	09/09/20 13:50	09/11/20 14:05	
280-140398-3	W-2B	Water	09/10/20 11:20	09/11/20 14:05	
280-140398-4	W-3	Water	09/09/20 12:15	09/11/20 14:05	
280-140398-5	W-5	Water	09/09/20 10:20	09/11/20 14:05	
280-140398-6	W-6	Water	09/09/20 11:30	09/11/20 14:05	
280-140398-7	W-7	Water	09/09/20 10:20	09/11/20 14:05	
280-140398-8	MW-1	Water	09/09/20 14:30	09/11/20 14:05	
280-140398-9	MW-2	Water	09/10/20 11:20	09/11/20 14:05	
280-140398-10	MW-3	Water	09/09/20 07:40	09/11/20 14:05	
280-140398-11	MW-4	Water	09/10/20 08:40	09/11/20 14:05	
280-140398-12	MW-5	Water	09/09/20 08:30	09/11/20 14:05	
280-140398-13	MW-6	Water	09/09/20 16:15	09/11/20 14:05	
280-140398-14	MW-6-DUP	Water	09/09/20 16:20	09/11/20 14:05	
280-140398-15	W-3-DUP	Water	09/09/20 12:20	09/11/20 14:05	
280-140398-16	W-5-EB	Water	09/09/20 10:45	09/11/20 14:05	

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Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-1

Date Collected: 09/09/20 12:25

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-1

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.15		0.425	0.467	1.00	0.252	pCi/L	09/17/20 06:30	10/09/20 10:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					09/17/20 06:30	10/09/20 10:32	1

Client Sample ID: W-2A

Date Collected: 09/09/20 13:50

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-2

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.09		0.455	0.493	1.00	0.321	pCi/L	09/17/20 06:30	10/09/20 10:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					09/17/20 06:30	10/09/20 10:32	1

Client Sample ID: W-2B

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-3

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.86		0.551	0.652	1.00	0.232	pCi/L	09/17/20 06:30	10/09/20 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					09/17/20 06:30	10/09/20 12:44	1

Client Sample ID: W-3

Date Collected: 09/09/20 12:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-4

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.812		0.225	0.237	1.00	0.177	pCi/L	09/17/20 06:30	10/09/20 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					09/17/20 06:30	10/09/20 12:44	1

Client Sample ID: W-5

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-5

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.20		0.273	0.293	1.00	0.192	pCi/L	09/17/20 06:30	10/09/20 12:44	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					09/17/20 06:30	10/09/20 12:44	1

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Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-6

Date Collected: 09/09/20 11:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-6

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma+/-$)	Total Uncert. ($2\sigma+/-$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.41		0.443	0.493	1.00	0.248	pCi/L	09/17/20 06:30	10/09/20 12:44	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110	09/17/20 06:30	10/09/20 12:44	1

Client Sample ID: W-7

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-7

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma+/-$)	Total Uncert. ($2\sigma+/-$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.36		0.527	0.608	1.00	0.255	pCi/L	09/17/20 06:30	10/09/20 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110	09/17/20 06:30	10/09/20 12:45	1

Client Sample ID: MW-1

Date Collected: 09/09/20 14:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-8

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma+/-$)	Total Uncert. ($2\sigma+/-$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.58		0.381	0.406	1.00	0.291	pCi/L	09/17/20 06:30	10/09/20 12:45	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110	09/17/20 06:30	10/09/20 12:45	1

Client Sample ID: MW-2

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-9

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma+/-$)	Total Uncert. ($2\sigma+/-$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.64		0.480	0.536	1.00	0.330	pCi/L	09/17/20 06:30	10/10/20 06:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	83.5		40 - 110	09/17/20 06:30	10/10/20 06:57	1

Client Sample ID: MW-3

Date Collected: 09/09/20 07:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-10

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma+/-$)	Total Uncert. ($2\sigma+/-$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.26		0.433	0.479	1.00	0.253	pCi/L	09/17/20 06:30	10/10/20 06:57	1

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		40 - 110	09/17/20 06:30	10/10/20 06:57	1

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Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: MW-4

Date Collected: 09/10/20 08:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-11

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.21		0.250	0.273	1.00	0.156	pCi/L	09/17/20 06:30	10/10/20 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.2		40 - 110					09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: MW-5

Date Collected: 09/09/20 08:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-12

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.862		0.213	0.227	1.00	0.143	pCi/L	09/17/20 06:30	10/10/20 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110					09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: MW-6

Date Collected: 09/09/20 16:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-13

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.06		0.208	0.229	1.00	0.117	pCi/L	09/17/20 06:30	10/10/20 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110					09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: MW-6-DUP

Date Collected: 09/09/20 16:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-14

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.775		0.179	0.192	1.00	0.123	pCi/L	09/17/20 06:30	10/10/20 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110					09/17/20 06:30	10/10/20 06:58	1

Client Sample ID: W-3-DUP

Date Collected: 09/09/20 12:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-15

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.04		0.232	0.251	1.00	0.161	pCi/L	09/17/20 06:30	10/10/20 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					09/17/20 06:30	10/10/20 06:58	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Client Sample ID: W-5-EB

Date Collected: 09/09/20 10:45

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-16

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.815		0.182	0.197	1.00	0.121	pCi/L	09/17/20 06:30	10/10/20 06:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110					09/17/20 06:30	10/10/20 06:58	1

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: W-1

Date Collected: 09/09/20 12:25

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-1

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.60		0.695	0.735	1.00	0.874	pCi/L	09/17/20 07:02	10/05/20 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.3		40 - 110					09/17/20 07:02	10/05/20 12:17	1
Y Carrier	84.9		40 - 110					09/17/20 07:02	10/05/20 12:17	1

Client Sample ID: W-2A

Date Collected: 09/09/20 13:50

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-2

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.49	G	0.845	0.904	1.00	1.01	pCi/L	09/17/20 07:02	10/05/20 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.8		40 - 110					09/17/20 07:02	10/05/20 12:17	1
Y Carrier	79.6		40 - 110					09/17/20 07:02	10/05/20 12:17	1

Client Sample ID: W-2B

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-3

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.34		0.735	0.766	1.00	0.983	pCi/L	09/17/20 07:02	10/05/20 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					09/17/20 07:02	10/05/20 12:18	1
Y Carrier	78.1		40 - 110					09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-3

Date Collected: 09/09/20 12:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-4

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.675		0.386	0.391	1.00	0.578	pCi/L	09/17/20 07:02	10/05/20 12:18	1

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Client Sample Results

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Method: 9320 - Radium-228 (GFPC)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110	09/17/20 07:02	10/05/20 12:18	1
Y Carrier	80.0		40 - 110	09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-5

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-5

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.22		0.487	0.499	1.00	0.687	pCi/L	09/17/20 07:02	10/05/20 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		40 - 110					09/17/20 07:02	10/05/20 12:18	1
Y Carrier	79.3		40 - 110					09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-6

Date Collected: 09/09/20 11:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-6

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.447	U	0.535	0.537	1.00	0.884	pCi/L	09/17/20 07:02	10/05/20 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110					09/17/20 07:02	10/05/20 12:18	1
Y Carrier	84.5		40 - 110					09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: W-7

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-7

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.34		0.652	0.687	1.00	0.784	pCi/L	09/17/20 07:02	10/05/20 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		40 - 110					09/17/20 07:02	10/05/20 12:18	1
Y Carrier	83.4		40 - 110					09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: MW-1

Date Collected: 09/09/20 14:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-8

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.04		0.637	0.644	1.00	0.977	pCi/L	09/17/20 07:02	10/05/20 12:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					09/17/20 07:02	10/05/20 12:18	1
Y Carrier	78.5		40 - 110					09/17/20 07:02	10/05/20 12:18	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: MW-2

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-9

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.32	G	0.822	0.877	1.00	1.02	pCi/L	09/17/20 07:02	10/05/20 12:18	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	83.5		40 - 110					09/17/20 07:02	10/05/20 12:18	1
Y Carrier	82.6		40 - 110					09/17/20 07:02	10/05/20 12:18	1

Client Sample ID: MW-3

Date Collected: 09/09/20 07:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-10

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.927		0.596	0.602	1.00	0.917	pCi/L	09/17/20 07:02	10/05/20 12:20	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	82.6		40 - 110					09/17/20 07:02	10/05/20 12:20	1
Y Carrier	86.4		40 - 110					09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: MW-4

Date Collected: 09/10/20 08:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-11

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.391	U	0.341	0.343	1.00	0.545	pCi/L	09/17/20 07:02	10/05/20 12:20	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	90.2		40 - 110					09/17/20 07:02	10/05/20 12:20	1
Y Carrier	84.9		40 - 110					09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: MW-5

Date Collected: 09/09/20 08:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-12

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.473	U	0.370	0.372	1.00	0.586	pCi/L	09/17/20 07:02	10/05/20 12:20	1
<i>Carrier</i>	%Yield	Qualifier	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	87.8		40 - 110					09/17/20 07:02	10/05/20 12:20	1
Y Carrier	87.9		40 - 110					09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: MW-6

Date Collected: 09/09/20 16:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-13

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.06		0.347	0.361	1.00	0.460	pCi/L	09/17/20 07:02	10/05/20 12:20	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Method: 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110	09/17/20 07:02	10/05/20 12:20	1
Y Carrier	83.7		40 - 110	09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: MW-6-DUP

Date Collected: 09/09/20 16:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-14

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.229	U	0.269	0.270	1.00	0.444	pCi/L	09/17/20 07:02	10/05/20 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		40 - 110					09/17/20 07:02	10/05/20 12:20	1
Y Carrier	84.9		40 - 110					09/17/20 07:02	10/05/20 12:20	1

Client Sample ID: W-3-DUP

Date Collected: 09/09/20 12:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-15

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.108	U	0.324	0.324	1.00	0.562	pCi/L	09/17/20 07:02	10/05/20 12:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					09/17/20 07:02	10/05/20 12:21	1
Y Carrier	80.4		40 - 110					09/17/20 07:02	10/05/20 12:21	1

Client Sample ID: W-5-EB

Date Collected: 09/09/20 10:45

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-16

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.306	0.307	1.00	0.501	pCi/L	09/17/20 07:02	10/05/20 12:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.8		40 - 110					09/17/20 07:02	10/05/20 12:21	1
Y Carrier	81.1		40 - 110					09/17/20 07:02	10/05/20 12:21	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-1

Date Collected: 09/09/20 12:25

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-1

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.75		0.815	0.871	5.00	0.874	pCi/L	10/22/20 10:22		1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: W-2A

Date Collected: 09/09/20 13:50

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-2

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma^{+/-}$)	Total Uncert. ($2\sigma^{+/-}$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.59		0.960	1.03	5.00	1.01	pCi/L		10/22/20 10:22	1

Client Sample ID: W-2B

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-3

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma^{+/-}$)	Total Uncert. ($2\sigma^{+/-}$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	6.20		0.919	1.01	5.00	0.983	pCi/L		10/22/20 10:22	1

Client Sample ID: W-3

Date Collected: 09/09/20 12:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-4

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma^{+/-}$)	Total Uncert. ($2\sigma^{+/-}$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.49		0.447	0.457	5.00	0.578	pCi/L		10/22/20 10:22	1

Client Sample ID: W-5

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-5

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma^{+/-}$)	Total Uncert. ($2\sigma^{+/-}$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.41		0.558	0.579	5.00	0.687	pCi/L		10/22/20 10:22	1

Client Sample ID: W-6

Date Collected: 09/09/20 11:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-6

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma^{+/-}$)	Total Uncert. ($2\sigma^{+/-}$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.86		0.695	0.729	5.00	0.884	pCi/L		10/22/20 10:22	1

Client Sample ID: W-7

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-7

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. ($2\sigma^{+/-}$)	Total Uncert. ($2\sigma^{+/-}$)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.70		0.838	0.917	5.00	0.784	pCi/L		10/22/20 10:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: MW-1

Date Collected: 09/09/20 14:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-8

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.61		0.742	0.761	5.00	0.977	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-2

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-9

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.96		0.952	1.03	5.00	1.02	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-3

Date Collected: 09/09/20 07:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-10

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.19		0.737	0.769	5.00	0.917	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-4

Date Collected: 09/10/20 08:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-11

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.60		0.423	0.438	5.00	0.545	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-5

Date Collected: 09/09/20 08:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-12

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.33		0.427	0.436	5.00	0.586	pCi/L		10/22/20 10:22	1

Client Sample ID: MW-6

Date Collected: 09/09/20 16:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-13

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.12		0.405	0.428	5.00	0.460	pCi/L		10/22/20 10:22	1

Eurofins TestAmerica, Denver

Client Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Client Sample ID: MW-6-DUP

Lab Sample ID: 280-140398-14

Date Collected: 09/09/20 16:20

Matrix: Water

Date Received: 09/11/20 14:05

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	1.00		0.323	0.331	5.00	0.444	pCi/L		10/22/20 10:22	1

Client Sample ID: W-3-DUP

Lab Sample ID: 280-140398-15

Date Collected: 09/09/20 12:20

Matrix: Water

Date Received: 09/11/20 14:05

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	1.15		0.398	0.410	5.00	0.562	pCi/L		10/22/20 10:22	1

Client Sample ID: W-5-EB

Lab Sample ID: 280-140398-16

Date Collected: 09/09/20 10:45

Matrix: Water

Date Received: 09/11/20 14:05

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Combined Radium 226 + 228	1.10		0.356	0.365	5.00	0.501	pCi/L		10/22/20 10:22	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-482619/24-A

Matrix: Water

Analysis Batch: 485231

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 482619

Analyte	Result	MB MB Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	1.323		0.320	0.341	1.00	0.225	pCi/L	09/17/20 06:30	10/10/20 06:59	1
Carrier		MB MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.6		40 - 110					09/17/20 06:30	10/10/20 06:59	1

Lab Sample ID: LCS 160-482619/1-A

Matrix: Water

Analysis Batch: 485202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 482619

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	
				Uncert. (2σ+/-)						
Radium-226	22.7	22.22		2.38	1.00	0.243	pCi/L	98	75 - 125	
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	94.8		40 - 110							

Lab Sample ID: LCSD 160-482619/2-A

Matrix: Water

Analysis Batch: 485202

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 482619

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER
				Uncert. (2σ+/-)						
Radium-226	22.7	20.51		2.25	1.00	0.239	pCi/L	90	75 - 125	0.37
Carrier	LCSD %Yield	LCSD Qualifier	Limits							
Ba Carrier	85.0		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-482620/24-A

Matrix: Water

Analysis Batch: 484717

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 482620

Analyte	Result	MB MB Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.3122	U	0.471	0.472	1.00	0.792	pCi/L	09/17/20 07:02	10/05/20 12:21	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.6		40 - 110					09/17/20 07:02	10/05/20 12:21	1
Y Carrier	83.4		40 - 110					09/17/20 07:02	10/05/20 12:21	1

Eurofins TestAmerica, Denver

QC Sample Results

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-482620/1-A

Matrix: Water

Analysis Batch: 484543

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 482620

Analyte	Spike Added	Total			%Rec.	Limits	
		LCS Result	LCS Qual	Uncert. (2σ+/-)			
Radium-228	15.5	15.79		1.96	1.00	0.902	pCi/L
<i>Carrier</i>							
<i>Ba Carrier</i>							
Ba Carrier	94.8		40 - 110				
Y Carrier	80.4		40 - 110				

Lab Sample ID: LCSD 160-482620/2-A

Matrix: Water

Analysis Batch: 484543

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 482620

Analyte	Spike Added	Total			%Rec.	Limits	RER	RER Limit
		LCSD Result	LCSD Qual	Uncert. (2σ+/-)				
Radium-228	15.5	16.36		2.12	1.00	1.07	pCi/L	
<i>Carrier</i>								
<i>Ba Carrier</i>								
Ba Carrier	85.0		40 - 110					
Y Carrier	73.3		40 - 110					

QC Association Summary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Rad

Prep Batch: 482619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	PrecSep-21	
280-140398-2	W-2A	Total/NA	Water	PrecSep-21	
280-140398-3	W-2B	Total/NA	Water	PrecSep-21	
280-140398-4	W-3	Total/NA	Water	PrecSep-21	
280-140398-5	W-5	Total/NA	Water	PrecSep-21	
280-140398-6	W-6	Total/NA	Water	PrecSep-21	
280-140398-7	W-7	Total/NA	Water	PrecSep-21	
280-140398-8	MW-1	Total/NA	Water	PrecSep-21	
280-140398-9	MW-2	Total/NA	Water	PrecSep-21	
280-140398-10	MW-3	Total/NA	Water	PrecSep-21	
280-140398-11	MW-4	Total/NA	Water	PrecSep-21	
280-140398-12	MW-5	Total/NA	Water	PrecSep-21	
280-140398-13	MW-6	Total/NA	Water	PrecSep-21	
280-140398-14	MW-6-DUP	Total/NA	Water	PrecSep-21	
280-140398-15	W-3-DUP	Total/NA	Water	PrecSep-21	
280-140398-16	W-5-EB	Total/NA	Water	PrecSep-21	
MB 160-482619/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-482619/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-482619/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 482620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-140398-1	W-1	Total/NA	Water	PrecSep_0	
280-140398-2	W-2A	Total/NA	Water	PrecSep_0	
280-140398-3	W-2B	Total/NA	Water	PrecSep_0	
280-140398-4	W-3	Total/NA	Water	PrecSep_0	
280-140398-5	W-5	Total/NA	Water	PrecSep_0	
280-140398-6	W-6	Total/NA	Water	PrecSep_0	
280-140398-7	W-7	Total/NA	Water	PrecSep_0	
280-140398-8	MW-1	Total/NA	Water	PrecSep_0	
280-140398-9	MW-2	Total/NA	Water	PrecSep_0	
280-140398-10	MW-3	Total/NA	Water	PrecSep_0	
280-140398-11	MW-4	Total/NA	Water	PrecSep_0	
280-140398-12	MW-5	Total/NA	Water	PrecSep_0	
280-140398-13	MW-6	Total/NA	Water	PrecSep_0	
280-140398-14	MW-6-DUP	Total/NA	Water	PrecSep_0	
280-140398-15	W-3-DUP	Total/NA	Water	PrecSep_0	
280-140398-16	W-5-EB	Total/NA	Water	PrecSep_0	
MB 160-482620/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-482620/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-482620/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-1

Date Collected: 09/09/20 12:25

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.47 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 10:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.47 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-2A

Date Collected: 09/09/20 13:50

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.98 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 10:32	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.98 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:17	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-2B

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.44 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.44 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-3

Date Collected: 09/09/20 12:15

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.73 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.73 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: W-5

Lab Sample ID: 280-140398-5

Matrix: Water

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.24 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.24 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-6

Lab Sample ID: 280-140398-6

Matrix: Water

Date Collected: 09/09/20 11:30

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.65 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:44	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.65 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-7

Lab Sample ID: 280-140398-7

Matrix: Water

Date Collected: 09/09/20 10:20

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.82 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:45	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.82 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-1

Lab Sample ID: 280-140398-8

Matrix: Water

Date Collected: 09/09/20 14:30

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.15 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485202	10/09/20 12:45	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.15 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Client Sample ID: MW-2

Date Collected: 09/10/20 11:20

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			499.71 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			499.71 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484543	10/05/20 12:18	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-3

Date Collected: 09/09/20 07:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			500.02 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:57	SCB	TAL SL
Total/NA	Prep	PrecSep_0			500.02 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-4

Date Collected: 09/10/20 08:40

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.20 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.20 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-5

Date Collected: 09/09/20 08:30

Date Received: 09/11/20 14:05

Lab Sample ID: 280-140398-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			750.04 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			750.04 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Eurofins TestAmerica, Denver

Lab Chronicle

Client: HDR Inc

Job ID: 280-140398-2

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Client Sample ID: MW-6

Lab Sample ID: 280-140398-13

Matrix: Water

Date Collected: 09/09/20 16:15

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.82 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.82 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: MW-6-DUP

Lab Sample ID: 280-140398-14

Matrix: Water

Date Collected: 09/09/20 16:20

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.64 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			999.64 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:20	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-3-DUP

Lab Sample ID: 280-140398-15

Matrix: Water

Date Collected: 09/09/20 12:20

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			749.54 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1			485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			749.54 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1			484717	10/05/20 12:21	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Client Sample ID: W-5-EB

Lab Sample ID: 280-140398-16

Matrix: Water

Date Collected: 09/09/20 10:45

Date Received: 09/11/20 14:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1000.29 mL	1.0 g	482619	09/17/20 06:30	AVB	TAL SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	485231	10/10/20 06:58	SCB	TAL SL
Total/NA	Prep	PrecSep_0			1000.29 mL	1.0 g	482620	09/17/20 07:02	AVB	TAL SL
Total/NA	Analysis	9320		1	1.0 mL	1.0 mL	484717	10/05/20 12:21	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			486561	10/22/20 10:22	GRW	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Eurofins TestAmerica, Denver

Accreditation/Certification Summary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
California	Los Angeles County Sanitation Districts	10259	06-30-21
California	State	2886	06-30-21
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
HI - RadChem Recognition	State	n/a	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	12-01-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	06-30-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-21
MI - RadChem Recognition	State	9005	06-30-21
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-21
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
North Dakota	State	R-207	06-30-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-21
Oregon	NELAP	4157	09-01-21
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-21
US Fish & Wildlife	US Federal Programs	058448	07-31-21
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-21
West Virginia DEP	State	381	10-31-21

Eurofins TestAmerica, Denver

Chain of Custody Record

Denver
#280

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140398-2

Login Number: 140398

List Source: Eurofins TestAmerica, Denver

List Number: 1

Creator: Pottruff, Reed W

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A		1
The cooler's custody seal, if present, is intact.	N/A		2
Sample custody seals, if present, are intact.	N/A		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True		5
Cooler Temperature is acceptable.	True		6
Cooler Temperature is recorded.	True		7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
Containers are not broken or leaking.	True		15
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	False		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	False		
Residual Chlorine Checked.	N/A		

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-140398-2

Login Number: 140398

List Source: Eurofins TestAmerica, St. Louis

List Number: 2

List Creation: 09/15/20 06:18 PM

Creator: Mazariegos, Leonel A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	Some of the samples were preserved upon arrival to lab.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Job ID: 280-140398-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
280-140398-1	W-1	89.3
280-140398-2	W-2A	79.8
280-140398-3	W-2B	89.6
280-140398-4	W-3	85.0
280-140398-5	W-5	82.9
280-140398-6	W-6	92.7
280-140398-7	W-7	87.5
280-140398-8	MW-1	88.7
280-140398-9	MW-2	83.5
280-140398-10	MW-3	82.6
280-140398-11	MW-4	90.2
280-140398-12	MW-5	87.8
280-140398-13	MW-6	82.0
280-140398-14	MW-6-DUP	86.2
280-140398-15	W-3-DUP	93.9
280-140398-16	W-5-EB	87.8
LCS 160-482619/1-A	Lab Control Sample	94.8
LCSD 160-482619/2-A	Lab Control Sample Dup	85.0
MB 160-482619/24-A	Method Blank	93.6

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
280-140398-1	W-1	89.3	84.9
280-140398-2	W-2A	79.8	79.6
280-140398-3	W-2B	89.6	78.1
280-140398-4	W-3	85.0	80.0
280-140398-5	W-5	82.9	79.3
280-140398-6	W-6	92.7	84.5
280-140398-7	W-7	87.5	83.4
280-140398-8	MW-1	88.7	78.5
280-140398-9	MW-2	83.5	82.6
280-140398-10	MW-3	82.6	86.4
280-140398-11	MW-4	90.2	84.9
280-140398-12	MW-5	87.8	87.9
280-140398-13	MW-6	82.0	83.7
280-140398-14	MW-6-DUP	86.2	84.9
280-140398-15	W-3-DUP	93.9	80.4
280-140398-16	W-5-EB	87.8	81.1
LCS 160-482620/1-A	Lab Control Sample	94.8	80.4
LCSD 160-482620/2-A	Lab Control Sample Dup	85.0	73.3
MB 160-482620/24-A	Method Blank	93.6	83.4

Tracer/Carrier Legend

Ba = Ba Carrier

Eurofins TestAmerica, Denver

Tracer/Carrier Summary

Client: HDR Inc

Project/Site: Xcel Energy GW CCR Monitoring - Comanche

Y = Y Carrier

Job ID: 280-140398-2

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Eurofins TestAmerica, Denver